

WHAT IS CLAIMED IS:

- 004220" EHS T2960
- Sub B1
1. A method of manufacturing an EL display device, said method comprising the steps of:
 - forming an amorphous semiconductor film comprising $\text{Si}_x\text{Ge}_{1-x}$ ($0 < x < 1$) on an insulating surface;
 - removing a portion of the amorphous semiconductor film to form a metal element addition region, where a metal element is capable of promoting crystallization of the amorphous semiconductor film;
 - selectively introducing the metal element in contact with the metal element addition region;
 - heating the amorphous semiconductor film so that crystals grow in parallel to the insulating surface from the metal element addition region, wherein the selectively introducing the metal element is selectively comprises coating a solution containing the metal element therein and applying water repellence of the semiconductor film to the solution.
 2. A method according to claim 1, wherein a surface of a region where crystal growth is conducted is exposed in crystal growth.
 3. A method according to claim 1, wherein the metal element is at least one selected from the group consisting of Fe, Co, Ni, Ru, Rh, Pd, Os, Ir, Pt, Cu and Au.
 4. A method of manufacturing an EL display device, said method comprising steps of:
 - forming an amorphous semiconductor film comprising $\text{Si}_x\text{Ge}_{1-x}$ ($0 < x < 1$) on an insulating surface;
 - removing a portion of the semiconductor film to form a metal element addition region, where a metal element is capable of promoting crystallization of the amorphous semiconductor film;
 - introducing the metal element in contact with the metal element addition region;

heating the amorphous semiconductor film so that crystals grow in parallel to the insulating surface from the metal element region;
forming a semiconductor island using the crystallized semiconductor film;
forming a gate electrode adjacent to the semiconductor island having a gate insulating film therebetween;
introducing an impurity into the semiconductor island to form at least a source region, a drain region, and a channel region between the source and drain regions,
wherein the metal element is selectively introduced by coating a solution containing the metal element therein and applying water repellency of the semiconductor film to the solution.

5. A method according to claim 4,
wherein the metal element is one selected from the group consisting of Fe, Co, Ni, Ru, Rh, Pd, Os, Ir, Pt, Cu and Au.

6. A method of manufacturing an EL display device, said method comprising the steps of:
forming an amorphous semiconductor film comprising $\text{Si}_x\text{Ge}_{1-x}$ ($0 < x < 1$) on an insulating surface;
removing a portion of the semiconductor film to form a metal element addition region, where a metal element is capable of promoting crystallization of the amorphous semiconductor film;
introducing the metal element in direct contact with the metal element addition region; and
crystallizing the amorphous semiconductor film in a parallel direction to the insulating surface from the metal addition region by heating;
forming a semiconductor island using the crystallized semiconductor film;
forming a gate electrode adjacent to the semiconductor island having a gate insulating film therebetween;

introducing an impurity into the semiconductor island to form at least a source region, a drain region, and a channel region between the source and drain regions;

forming an insulating film covering the semiconductor island and the gate electrode;

forming at least an electrode being connected to at least one of the source and drain regions through the insulating film,

wherein the metal element is selectively introduced by coating a solution containing the metal element therein and applying water repellency of the semiconductor film to the solution.

7. A method according to claim 6,

wherein the metal element is at least one selected from the group consisting of Fe, Co, Ni, Ru, Rh, Pd, Os, Ir, Pt, Cu and Au.

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Add B2